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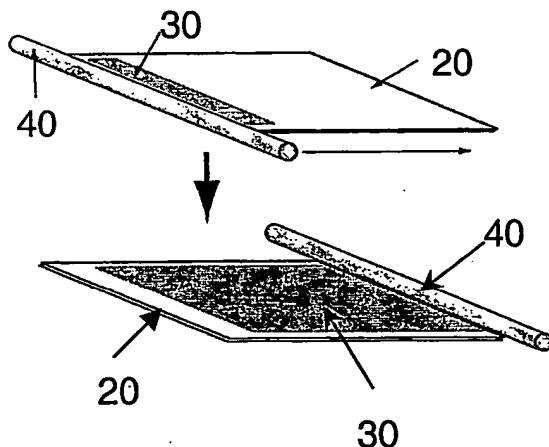
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(54) Title: LYOTROPIC LIQUID CRYSTAL NANOFILTRATION MEMBRANES



(57) Abstract: The invention provides composite nanofiltration membranes (Fig. 5) with lyotropic liquid crystal (LLC) polymer porous membranes (30) attached to a porous support (20). The LLC membranes are prepared from LLC monomers which form the inverted hexagonal or bicontinuous cubic phase. The arrangement, size, and chemical properties of the pores can be tailored on the molecular level. The composite membrane of the invention is useful for separation processes involving aqueous and nonaqueous solutions as well as gases. Methods for making and using the composite nanofiltration membranes of the invention are also provided.

WO 2004/060531 A1